British Journal of Venereal Diseases, 1980, **56**, 59-64

Abstracts

These selected abstracts and titles from the world literature are arranged in the following sections:

Syphilis and other treponematoses (clinical and therapy)

Penicillin levels in blood and CSF achieved by treatment of syphilis

EMC DUNLOP, SS AL-EGAILY, AND ET HOUANG (London, England). *JAMA* 1979; **241:** 2538-40.

This paper, from the Whitechapel Clinic, London, reports the results obtained in an investigation to determine what dosages and preparations of penicillin are required to give treponemicidal concentrations of penicillin in the cerebrospinal fluid (CSF). Only penicillin G was used. All the patients had late acquired or congenital syphilis. The samples of CSF were taken after treatment. Assays were performed using a microbiological method with *Sarcina lutea* as the test organism.

Five men were treated with PAM 600 000 IU intramuscularly daily for 10 days. CSF concentrations of penicillin in these patients were below 0·03 IU/ml, which is the minimum concentration recommended by the WHO to achieve a treponemicidal effect. Four men were treated with penicillin G procaine 600 000 IU daily for 10 days, and therapeutic concentrations were not achieved in the CSF. Using penicillin G 500 000 IU i.m. six hourly for 17 days with oral probenecid 500 mg six-hourly or 2·4 megaunits penicillin G procaine daily with oral probenecid 500 mg six-hourly, treponemicidal concentrations were found in all patients.

If penicillin G procaine 600 000 IU daily was combined with probenecid 500 mg six-hourly, treponemicidal concentrations in the CSF were obtained in two patients with normal CSF but not in one patient with a raised protein level. A similar result was achieved when 1·2 megaunits penicillin G procaine was used with oral probenecid; only patients with normal CSFs had treponemicidal concentrations of penicillin.

G D Morrison

Cystoid macular edema as the primary sign of neurosyphilis

NF MARTIN AND CR FITZGERALD (Florida, USA). *Am J Ophthalmol* 1979; **88:** 28-31.

Syphilitic osteomyelitis with diffusely abnormal bone scan

D SIEGEL AND SZ HIRSCHMAN (New York, USA). *Mt Sinai J Med NY* 1979; **46:** 320-2.

Syphilis (serology and biological false-positive phenomenon)

A solid-phase radioimmunoassay for the detection of antibodies to *Treponema pallidum*

JM MILLER, EM DONOWHO, DW TRENT, AND EEM MOODY (Texas, USA). *Sex Trans Dis*, 1979; **6:** 43-9.

Syphilis (pathology and experimental)

Unique lipid composition of *Treponema pallidum* (Nichols virulent strain)

HM MATTHEWS, T-K YANK, AND HM JENKINS (Minnesota, USA). *Infect Immun* 1979; **24:** 713-9.

Electron microscopy of treponemes subjected to the *Treponema pallidum* immobilization (TPI) test

K HOVIND-HOUGEN, HAA NIELSEN, AND A BIRCH-ANDERSEN (Copenhagen, Denmark). *Acta Pathol Microbiol Scand (C)* 1979; **87:** 217-22.

Suspensions of *Treponema pallidum* (Nichols strain) were mixed with normal and syphilitic serum and heated or unheated guinea pig serum and incubated as in the TPI test. At intervals motility counts were made and specimens examined under the electron microscope after negative staining with ammonium molybdate. After eight hours all the treponemes were immobilised in the tubes with syphilitic serum and active complement. These organisms were swollen with a distinct gap between the cytoplasmic body and the outer membrane which was obscured by fuzzy material and sometimes showed balloon-like evaginations. In contrast, treponemes incubated in medium alone, with normal serum with heated or unheated complement or with syphilitic serum and inactivated complement retained their normal morphology although up to 40% of those suspended in medium alone were non-motile. The nature of the fuzzy material is not known, but it may represent complexes of antibody with heat-labile factors in guinea pig serum.

A E Wilkinson

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Gonorrhoea (clinical)

Gonococcal otitis externa (Letter)

SS PAREEK (Riyadh, Saudi Arabia) *New Engl J Med* 1979; **300:** 1490.

Isolated gonococcal pulmonary valve endocarditis: diagnosis by echocardiography
BS DZINDZIO, L MEYER, R OSTERHOLM, A HOPEMAN, J WOLTJEN, AND AD FORKER (Nebraska, USA) *Circulation,* 1979; **59:** 1319-24.

Gonococcal infection in infants and children. Medical and epidemiologic considerations
YM FELMAN AND JA NIKITAS (New York, USA) *NY State J Med* 1979; **79:** 1063-5.

Gonococcal ophthalmia neonatorum after delivery by Cesarean section: report of a case
CL STRAND AND VA ARANGO (Atlanta, USA) *Sex Transm Dis* 1979; **6:** 77-8.

Superimposed traumatic and gonococcal proctitis: report of two cases
E KREUTZER AND J HANSBROUGH (Colorado, USA) *Sex Transm Dis* 1979; **6:** 75-6.

Gonorrhoea (microbiology)

New options for diagnosis and control of gonorrheal urethritis in males using uncentrifuged first voided urine (FVU) as a specimen for culture
ES MURRAY, MJF BENFARI, SR COPPOLA, MD HUGHES, WC FENG, RM MEDEIROS, AND LJ KUNZ (Boston, USA). *Am J Public Health* 1979; **69:** 596-8.

This study comprised 514 male patients with symptoms, signs, or suspicion of gonorrhoea attending a genitoinfectious diseases clinic at the Massachusetts General Hospital, Boston.

After a urethral swab had been taken for examination by culture and microscopy, the patient was asked to pass 20 ml of urine into a first voided urine (FVU) specimen collector. All FVU specimens were inoculated on to modified Thayer-Martin medium within 2-10 minutes of voiding. Culture of FVU gave positive results in 100 patients and urethral culture in 99. Seven patients, culture-positive in both types of specimen, presented with asymptomatic urethral infection. Recent urination did not affect the isolation of gonococci from either FVU or urethral specimens. FVU specimen collection was considered to be more acceptable to a male patient than a swab or loop inserted into the urethra. Unfortunately, immediate diagnosis by Gram-staining was not investigated with respect to FVU specimens.

H Young

***Neisseria meningitidis* and *Neisseria gonorrhoeae* bacteremia associated with C6, C7 or C8 deficiency**
BH PETERSEN, TJ LEE, R SNYDERMAN, AND GF BROOKS (North Carolina and California, USA). *Ann Intern Med* 1979; **90:** 917-20.

Thirteen of 24 patients with homozygous deficiency of the sixth, seventh, or eighth components of complement, and who had had at least one episode of meningococcal or gonococcal bacteraemia, were described. It was shown that deficiency of one or other of these components was significantly associated with the development of disseminated infection and that in individuals who develop recurrent neisserial infections haemolytic complement studies are indicated.

A McMillan

Auxanographic grouping and typing of *Neisseria gonorrhoeae*
AT HENDRY AND IO STEWART (Hamilton, Canada). *Can J Microbiol* 1979; **25:** 512-21.

Release of soluble peptidoglycan from growing gonococci: hexaminidase and amidase activities
RS ROSENTHAL (Indiana, USA). *Infect Immun* 1979; **24:** 869-78.

In vivo conjugal transfer of R plasmids in *Neisseria gonorrhoeae*
M ROBERTS AND S FALKOW (Washington, USA). *Infect Immun* 1979; **24:** 982-4.

The donor strains CDC 67 and CDC 66 both produced β-lactamase mediated by a 4·4 Mdal plasmid. The former also possessed a 24·5 Mdal plasmid which has been found to promote the transfer of itself and the smaller plasmid in vitro. Both strains were sensitive to nalidixic acid and rifampin whereas the recipient strain used, F 62, was resistant to these but sensitive to penicillin. Donor and recipient strains were inoculated together into subcutaneous chambers in guinea pigs and subcultures made on to media supplemented with penicillin and nalidixic acid. The donor CDC 67, possessing the 24·5 Mdal plasmid, transferred penicillin resistance to F 62 with a frequency of 10^{-2} to 10^{-4} per recipient cell, but donor CDC 66, which lacked the large plasmid, was unable to do this. Thus R plasmid transfer was achieved in vivo in the absence of any antibiotic pressure. This strengthens the hypothesis that the 24·5 Mdal plasmid plays a part in the spread of the 4·4 Mdal plasmid from gonococcus to gonococcus in nature.

A E Wilkinson

(Reprinted from *Abstracts on Hygiene* by permission of the Editor.)

Protection by monospecific gonococcal antisera of the chicken embryo challenged with *Neisseria gonorrhoeae*
JN ROBERTSON (Southampton, England). *J Med Microbiol* 1979; **12:** 283-9.

Detection of gonococcal antigens in urine by radioimmunoassay
MJ THORNLEY, DV WILSON, RD de HORMAECHE, JK OATES, AND RRA COOMBS (Cambridge, England). *J Med Microbiol* 1979; **12:** 161-75.

A solid-phase radioimmunoassay is described which detected gonococcal antigen in urine sediments from 74% (31 of 42) of men with urethral gonorrhoea and none of 27 men with non-specific urethritis. Among women, 71% (10 of 14) with gonorrhoea were detected, but also 17% (three of 18), who did not have gonorrhoea, gave false-positive results. Compared with the Gram-stained smear, this test is less sensitive in men and less specific in women. The authors discuss possible reasons for these unimpressive results, which include the fact that the antigen used in preparation of the antiserum was derived from whole gonococci rather than surface components. It was originally intended to examine the urine supernatant until it was discovered that this contained very little antigen, the bulk being associated with pus cells in the sediment. A specificity test became necessary on each sample to correct for non-specific binding of radioactive-labelled antibody.

It is a pity that the authors did not carry out more preliminary work on their choice of antigen for raising the antiserum, and I cannot help feeling some doubts about the collection of urine samples. The importance of catching the first urine passed is not stressed in the text, which simply states "the patient's bladder contents, up to a volume of 180 ml, were collected". As it stands, the human observer aided by a simple light microscope remains more accurate and reliable than radioimmunoassay.

Brian Evans

Inhibitors in urine of radioimmunoassay for the detection of gonococcal antigens

MJ THORNLEY, MG ANDREWS, JO BRIGGS, AND BK LEIGH (Cambridge, England). *J Med Microbiol* 1979; **12:** 177-85.

It was found that the supernatant after centrifugation of 18 of 27 specimens of urine from patients with non-specific urethritis and 22 of 23 patients with gonorrhoea were inhibitory in a solid-phase radioimmunoassay system for the detection of soluble gonococcal antigens. Pus cells from urine also had an inhibitory effect. This could be abolished or reduced in most, but not in all, cases by adding soya bean trypsin inhibitor to the specimen. It is thought that inhibition is caused by proteases set free from pus cells in the urine; these act on the gonococcal antigen but not on the anti-gonococcal antibody added to the test system. Other inhibitors, not affected by the trypsin inhibitor, were also present in some specimens of urine. The centrifuged deposit from the urine of patients with gonorrhoea or non-specific urethritis also had inhibitory properties, but these could be virtually abolished by treatment with the trypsin inhibitor.

A E Wilkinson

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The gonococcus and the toilet seat

JH GILBAUGH AND PC FUCHS (Portland, USA). *New Engl J Med* 1979; **301:** 91-3.

Suspensions of gonococci in saline and in broth and diluted gonococcal pus were spread on a lavatory seat and on lavatory paper and cultures made at intervals. No gonococci were recovered from the areas inoculated with saline or broth suspensions after these had dried (10 minutes). Gonococci were recovered from the areas on the seat on which pus had been spread for up to two hours and from the lavatory paper for up to three hours.

No gonococci were recovered from 72 random samples from seats in public lavatories. The organisms recovered were mainly those of the skin rather than faecal flora. Although gonococci may remain viable in pus on a lavatory seat for several hours, it is difficult to visualise how they could be transferred to the genital mucosa unless indirectly by the patient's hands. Contaminated toilet paper may have a greater potential as a direct source of infection than the lavatory seat blamed by some patients.

A E Wilkinson

(Reprinted from *Abstracts on Hygiene* by permission of the Editor.)

Genetic basis for colonial variation in *Neisseria gonorrhoeae*

L NORLANDER, J DAVIES, A NORQVIST, AND S NORMARK (Ulmea, Sweden). *J Bacteriol* 1979; **138:** 762-9.

Genetic exchange mechanisms in *Neisseria gonorrhoeae*

L NORLANDER, J DAVIES, AND S NORMARK (Ulmea, Sweden). *J Bacteriol* 1979; **138:** 756-61.

Orogenital contact and the isolation of *Neisseria gonorrhoeae, Mycoplasma hominis,* and *Ureaplasma urealyticum* from the pharynx

SG SACKEL, S ALPERT, NJ FIUMARA, A DONNER, C LAUGHLIN, AND WM McCORMACK (Boston, USA). *Sex Transm Dis* 1979; **6:** 64-8.

***Neisseria gonorrhoeae* membrane microenvironment studied by spin-label electron spin resonance: comparison of colony types**

WJ NEWHALL, FW KLEINHANS, RS ROSENTHAL, WD SAWYER, AND RA HAAK (Indiana, USA). *J Bacteriol* 1979; **139:** 98-106.

Gonorrhoea (therapy)

Prepubertal gonococcal vulvovaginitis: a penicillin-resistant infection treated with cefotoxime (Letter)

V REYNOLDS, JK OATES, AND SWB NEWSON (Cambridge, England). *Lancet* 1979; **2:** 206-7.

Comparison of ampicillin plus probenecid with amoxycillin plus probenecid for treatment of uncomplicated gonorrhea

YM FELMAN, DC WILLIAM, AND MC CORSARO (New York, USA). *Sex Transm Dis* 1979; **6:** 72-4.

Non-specific genital infection

Chlamydial infection of mothers and their infants

GT FROMMELL, R ROTHENBERG, S-P WANG, AND K McINTOSH (Colorado, Washington, and Atlanta, USA). *J Pediatr* 1979; **95:** 28-32.

Prospective screening for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* was performed on 340 pregnant women over a 17-month period. Infants born to 18 chlamydial culture-positive women were followed for nine months and compared with 16 chlamydia-negative controls.

Chlamydia was found in 30 (8·8%) of the 340 women, more frequently in younger, black, and unmarried women. Gonorrhoea was found in six (two chlamydial culture-positive and four culture-negative). Clinical characteristics, obstetric history, complications of labour and delivery, and evaluation of the neonate were similar in the chlamydia-positive and chlamydia-negative groups.

Eight infants from the chlamydia-positive group developed conjunctivitis (from 1 to 9 weeks of age), and seven of those had cultural evidence of chlamydial infection (in conjunctiva, nasopharynx, or rectum). Chronic pneumonitis (onset four and six weeks) was diagnosed in two of these.

One of the control culture-negative group developed conjunctivitis and recurrent wheezing diagnosed as "asthma" was found in another child after six weeks.

The nasopharynx was the most common culture-positive site (seven of the eight infants), with three rectal and two conjunctival cultures giving positive results. An overall chlamydial infection rate of 61% and evidence of clinical disease in 44% was demonstrated in the infants of chlamydial culture-positive mothers.

Comparison was made with other studies and it was suggested that: (a) intrauterine infection did not take place (as IgM concentrations in blood were not raised); and (b) postpartum transmission was possible (as breast feeding was weakly associated with the development of clinical conjunctivitis).

R S Pattman

Prospective study of chlamydial infection in neonates

J SCHACHTER, M GROSSMAN, J HOLT, R SWEET, E GOODNER, AND J MILLS (California, USA). *Lancet* 1979; **2:** 377-9.

The consequence of cervical infection with *Chlamydia trachomatis* in pregnant women was examined prospectively in their infants over a one-year period. Chlamydia was found in 4% (36/900) of pregnant women, and 20 infants born through chlamydia-infected cervices were compared with 18 infants born to chlamydia-negative mothers.

Conjunctivitis developed within 19 days in 13 neonates born to chlamydia-positive

mothers; chlamydia were recovered from the conjunctivae of seven (35%) of these. Pneumonia (diagnosed by radiological examination) developed within 60-90 days in five infants exposed to chlamydia; four (20%) were associated with chlamydial infection, as judged by finding high titres of IgM class antichlamydial antibodies (geometric mean titre 1/448) in the sera. No evidence of chlamydial infection was found in those infants born through chlamydia-negative cervices ($p<0.001$).

A tentative estimate of infection rate was made of eight cases of chlamydial pneumonia per 1000 live births and 14 cases of chlamydial conjunctivitis per 1000 live births (total chlamydial infection rate 28 per 1000 live births).

R S Pattman

Chlamydia, cytomegalovirus, and Yersinia in inflammatory bowel disease
ET SWARBRICK, JGC KINGHAM, HL PRICE, AJ BLACKSHAW, PD GRIFFITHS, S DAROUGAR, AND NA BUCKELL (London, England). *Lancet* 1979; **2:** 11-12.

***Chlamydia trachomatis* in women: antibody in cervical secretions as a possible indicator of genital infection**
DE McCOMB, RL NICHOLS, DZ SEMINE, JR EVRARD, S ALPERT, VA CROCKETT, B ROSNER, SH ZINNER, AND WM McCORMACK (Harvard, USA). *J Infect Dis* 1979; **139:** 628-33.

The role of local and serum antibody in the diagnosis of genital chlamydial infections is controversial. This paper attempts to clarify the predictive volume of these two parameters.

One hundred and eighty-five women college students were examined for genital infections with *Chlamydia trachomatis* and the presence of antibody in cervical secretions and serum. Of these women, 74% attended for fertility control or routine gynaecological examination and the remainder with gynaecological symptoms. One hundred and sixty (83%) were sexually experienced. *C trachomatis* was isolated from nine women, all sexually active; serum antibody was detected in these women and cervical secretion antibody in eight of the nine. Cervical antibody was detected in 14% of all the women, but none was detectable in the sexually inexperienced. Serum antibody was present in 38% of the women, including 23% of the sexually inexperienced.

The authors conclude that *C trachomatis* is sexually transmissible, with a correlation between increasing sexual experience and presence of the organism or antibody. They further suggest that cervical secretion antibody has a better predictive value for infection than serum antibody.

G L Ridgway

Activity of oral amoxycillin, ampicillin, and oxytetracycline against infection with *Chlamydia trachomatis* in mice
MJ KRAMER, R CLEELAND, AND E GRUNBERG (New Jersey, USA). *J Infect Dis* 1979; **139:** 717-9.

Susceptibility of *Chlamydia trachomatis* to antibiotics in vitro and in vivo
G JOHANNISSON, A SERNRYD, AND E LYCKE (Goteborg, Sweden). *Sex Transm Dis* 1979; **6:** 69-71.

Activity of antimicrobials against *Chlamydia trachomatis* in vitro (Letter)
GL RIDGWAY AND JD ORIEL (London, England). *J Antimicrob Chemother* 1979; **5:** 483-4.

Erythromycin and lymecycline treatment in chlamydia-positive and chlamydia-negative non-gonococcal urethritis—a partner-controlled study
A LASSUS, J PAAVONEN, M KOUSA, AND P SAIKKU (Helsinki, Finland). *Acta Derm Venereol (Stockh)* 1979; **59:** 278-81.

A group of 213 men with non-gonococcal urethritis and their sexual partners were treated either with erythromycin stearate 500 mg twice daily for 15 days or with lymecycline 300 mg twice daily for 10 or 20 days. *Chlamydia trachomatis* was isolated from 40% of the men, from 26% of their female partners, and from 56% of the partners of men with chlamydia-positive urethritis. One hundred and eighty-one men were available for evaluation of therapy. There were no signficant differences between the treatment schedules. The cure rate was 86-90% in men with chlamydia-positive urethritis and 89-100% in men with chlamydia-negative urethritis. Four of the 17 chlamydia-positive women treated with erythromycin and two of the 20 chlamydia-positive women treated with lymecycline for 10 days still harboured chlamydia on re-examination.

A McMillan

Modified metabolic inhibition test for serotyping strains of *Ureaplasma urealyticum* (T-strain mycoplasma)
JA ROBERTSON AND GW STEMKE (Alberta, Canada). *J Clin Microbiol* 1979; **9:** 673-6.

Effects of reducing agents, catalase, and reuse of medium on toxicity of media for growth on *Ureaplasma urealyticum*
IA SAYED AND GE KENNY (Washington, USA). *J Infect Dis* 1979; **139:** 720-2.

In-vitro susceptibility of *Ureaplasma urealyticum* to rosamicin
TF SMITH (Minnesota, USA). *Antimicrob Agents Chemother* 1979; **16:** 106-8.

A double-blind crossover study of the effect of doxycycline on mycoplasma infection and infertility
RA HINTON, LM EGDELL, BE ANDREWS, SKR CLARKE, AND SJ RICHMOND (Bristol, England). *Br J Obstet Gynaecol* 1979; **86:** 379-83.

The relationship of infection with *Mycoplasma hominis* and *Ureaplasma urealyticum* to infertility was examined by observing the prevalence in 42 selected infertile couples and studying the effect of a double-blind crossover trial of doxycycline and placebo.

The couples were divided into two matched groups, although a higher proportion of those who had previously never been pregnant were given doxycycline first. Monthly cervical cultures were taken for *M hominis, U urealyticum, Neisseria gonorrhoeae,* and *Candida albicans.* Monthly vaginal samples were cultured for *Trichomonas vaginalis* and an initial cervical sample cultured for *Chlamydia trachomatis.* Semen samples were cultured for *M hominis* and *U urealyticum* and three postcoital tests were performed during the trial. Doxycycline was administered in three 10-day courses, to one group in relation to the menstrual cycle (over three months) and placebo was administered in the same way to the second group. After three months those who had taken doxycycline were given placebo and those previously taking placebo were given doxycycline.

Infection with *U urealyticum* and *M hominis* was found in 21 couples and with *C albicans* in two women; no other pathogens were isolated. Of the 21 couples infected, 19 were cured with doxycycline; of these, four women became pregnant. Pregnancy was achieved by one couple free from infection, one couple before treatment started, and one after the trial was over.

As pregnancy occurred within the first four months of the trial in five of the seven women, it was suggested that the psychological effect of taking treatment was of more importance than the effect of the drug on the infection.

R S Pattman

Etiology, manifestations and therapy of acute epididymitis: prospective study of 50 cases.

RE BERGER, ER ALEXANDER, JP HARNISCH, CA PAULSEN, GD MONDA, AND KK HOLMES (Washington, USA). *J Urol* 1979; **121:** 750-4.

Between 1972 and 1977, at Seattle, a prospective study was carried out of 50 men presenting with acute epididymitis and who had received no antibiotic treatment within the preceding month.

Swabs were taken from the urethra for culture of *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. Mid-stream urine specimens for culture of aerobic bacterial pathogens were taken from all 16 patients aged 35 years and over and from 22 of 34 men under the age of 35. Cultures for *Ureaplasma urealyticum* and *Mycoplasma hominis* were made on first-voided urine specimens or on urethral specimens from 16 men over the age of 35 and from 28 younger patients. In 11 of the latter patients, expressed prostatic secretion was also cultured for aerobic and anaerobic pathogens, *N gonorrhoeae, U urealyticum, M hominis,* and *C trachomatis*. Similar microbiological studies were made on 19 epididymal aspirates. Serum was taken on the first visit and again two to six weeks later and was tested for antibody to *C trachomatis* by microimmunofluorescence. Eight sexual partners were investigated, and culture specimens collected for the above organisms. Treatment depended on which organisms were isolated and followed standard practice.

Escherichia coli was isolated from 12 of 16 men aged 35 and over but from only one of 28 younger patients. *N gonorrhoeae* and *C trachomatis* were isolated in 23 of 34 men under the age of 35 but only one of 16 older men ($p<0{\cdot}0005$). Of all patients under 35 who did not have gonococcal or Gram-negative rod infections or who had not suffered direct trauma to the scrotal contents, 16 (67%) of 24 had a positive culture result for *C trachomatis*. Serum antibody to *C trachomatis* was detected in 16 of 17 men from whom the organism was isolated and in 11 of 29 who had negative cultures ($p<0{\cdot}0002$). Epididymal aspirates confirmed the findings of the urethral culture. *U urealyticum* was isolated from eight of 10 men with no other apparent aetiological agent, from two of five men with gonorrhoea, and from nine of 16 with chlamydial infection. No new observations were made on the well recognised features of epididymitis. All patients with gonococcal or coliform epididymitis responded to specific therapy. Response was also satisfactory in 20 patients with nongonococcal, non-coliform epididymitis treated with tetracycline for 10 days.

E coli was the predominant pathogen isolated from the urine of men over the age of 35 whereas *C trachomatis* and *N gonorrhoeae* were the predominant pathogens found in younger men. Chlamydial epididymitis accounted for two-thirds of idiopathic epididymitis in young men and was associated with oligospermia. In the sexual partners of men with chlamydial infection, six had serum antibody to *C trachomatis,* two had positive chlamydial culture results from the cervix, and another two had nongonococcal pelvic inflammatory disease. It was concluded that tetracycline should be offered to female sexual partners of men with epididymitis.

M Waugh

Trichomoniasis

Metronidazole and the fetal alcohol syndrome (Letter)

PM DUNN, S STEWART-BROWN, AND R PEEL (Bristol, England). *Lancet* 1979; **2:** 144.

Mutagenicity of metronidazole (Letter)

B HARTLEY-ASP (Helsingborg, Sweden). *Lancet* 1979; **1:** 275.

Metronidazole is mutagenic in bacteria, and a possible chromosome-breaking activity has been reported during the treatment of patients with Crohn's disease.[1]

Twelve women with trichomoniasis were treated with 200 mg metronidazole three times daily for seven days. Blood was collected before treatment, on the seventh day, and three weeks after the end of treatment, and cultures were set up for chromosome analysis; samples of 100 cells per patient were analysed for chromosomal aberrations. No chromosome-breaking activity was detected and metronidazole is thought to be a safe drug for short-term treatment.

A E Wilkinson

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Reference

1. Mitelman F, Hartley-Asp B, Ursing B. *Lancet* 1976; **1:** 802.

Candidosis

Lactobacillus overgrowth for treatment of moniliary vulvovaginitis (Letter)

TE WILLS (Minnesota, USA). *Lancet* 1979; **2:** 482.

Isolation and characterization of a polyene-resistant variant of *Candida tropicalis*

WG MERZ AND GR SANDFORD (Baltimore, USA). *J Clin Microbiol* 1979; **9:** 677-80.

Autoregulation of germ tube formation by *Candida albicans*

KC HAZEN AND JE CUTLER (Montana, USA). *Infect Immun* 1979; **24:** 661-6.

Detection of *Candida* antigen in sera of patients with candidiasis by an enzyme-linked immunosorbent assay-inhibition technique

E SEGAL, RA BERG, PA PIZZO, AND JE BENNET (Maryland, USA). *J Clin Microbiol* 1979; **10:** 116-8.

Genital herpes

Immunotherapy and drugs in neonatal disseminated herpes simplex virus type 2 infections: a mouse model

C STRULOVITCH, MI MARKS, A SONEJI, AND S GOLDBERG (Montreal, Canada). *J Antimicrob Chemother* 1979; **5:** 437-46.

Inhibition of herpes virus by a new compound—acyclic guanosine

JS OXFORD (London, England). *J Antimicrob Chemother* 1979; **5:** 333-4.

Herpetic proctitis and sacral radiomyelopathy—a hazard for homosexual men

PL SAMARSINGHE, JK OATES, AND IPB MacLENNAN (London, England). *Br Med J* 1979; **2:** 356-6.

Colposcopy in a case of suspected genital herpes infection in early pregnancy
JM van MEIR, AC DROGENDIJK, JW WLADMIROFF, AND G WIELENGA (Rotterdam, the Netherlands). *Acta Obstet Gynecol Scand* 1979; **58:** 221-3.

Other sexually transmitted diseases

Comparison of two media for isolation of *Haemophilus vaginalis*
RF SMITH (California, USA). *J Clin Microbiol* 1979; **9:** 729-30.

A reservoir of hepatitis B
KS LIM, RD CATTERALL, R SIMON, DS DANE, M BRIGGS, AND RS TEDDER (London, England). *J Infect* 1979; **1:** 163-70.

A total of 7300 patients attending a clinic for sexually transmitted diseases were screened for hepatitis B surface antigen (HBsAg). The 72 HBsAg-positive sera were tested for e antigen and antibody (HBe and anti-HBe) by immunodiffusion and radio-immunoassay and the patients were followed up to find out whether they were HBsAg-carriers or suffering from acute hepatitis B infections. Most of the HBe-positive patients were found to be carriers. Seventeen of 19 HBe-positive carriers and 14 of 16 patients with acute infections were male homosexuals. Fourteen (58%) of 24 male homosexual carriers from the United Kingdom or other countries with a low prevalence of hepatitis B were HBe-positive. The effect of identifying and then treating or counselling HBe-positive HBsAg carriers is discussed.
Authors' summary

Homosexual hepatitis
JC COLEMAN, BA EVANS, A THORNTON, AND AJ ZUCKERMAN (London, England). *J Infect* 1979; **1:** 61-6.

Public health and social aspects

Gonorrhea in street prostitutes: epidemiologic and legal implications
JL POTTERAT, R ROTHENBERG, AND DC BROSS (Colorado, USA). *Sex Transm Dis* 1979; **6:** 58-63.

Foreign Office survey of venereal disease and prostitution control 1869-1870
JB POST. *Med Hist* 1978; **22:** 327-34.

Miscellaneous

Sexually transmitted enteric diseases
YM FELMAN AND NB RICCIARDI (New York, USA). *Bull NY Acad Med* 1979; **55:** 533-9.

Contact reaction of penicillamine in vaginal secretions (Letter)
PCH NEWBOLD (Worcester, England). *Lancet* 1979; **1:** 1344.

Genital actinomycosis (Letter)
EM TIAMSON (Baltimore, USA). *Hum Pathol* 1979; **10:** 119-20.

The association of histocompatability antigens of the B7 cross-reacting group with Peyronie's disease
MK WILLSCHER, WF CWAKA, AND DE NOVICKI (California, USA). *J Urol* 1979; **122:** 34-5.